

REMARKS/ARGUMENTS

Claims 1 – 3 and 7 – 24 are presented for reconsideration and further examination in view of the foregoing amendments and following remarks.

In the outstanding Office Action, the Examiner rejected claim 8 under 35 U.S.C. §112, second paragraph as being indefinite; rejected claims 1 – 3, 7, 8, 10 – 12 and 15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,293,898 to Masloff (hereinafter referred to as “the Masloff ‘898 patent”) in view of U.S. Patent No. 5,806,832 to Larbuisson (hereinafter referred to as “the Larbuisson ‘832 patent”) and further in view of U.S. Patent No. 1,125,315 to Hayward (hereinafter referred to as “the Hayward ‘315 patent”); rejected claims 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over the Masloff ‘898 patent in view of the Larbuisson ‘832 patent and further in view of the Hayward ‘315 patent and further in view of Applicant’s Admitted Prior Art (hereinafter referred to as “AAPA”); rejected claims 9 and 16 under 35 U.S.C. §103(a) as being unpatentable over the Masloff ‘898 patent in view of Larbuisson ‘832 patent in view of the Hayward ‘315 patent and further in view of U.S. Patent No. 4,562,861 to Payton (hereinafter referred to as “the Payton ‘861 patent”); rejected claims 17 – 20 under 35 U.S.C. §103(a) as being unpatentable over the Masloff ‘898 patent in view of the Payton ‘861 patent; rejected claim 21 under 35 U.S.C. §103(a) as being unpatentable over the Masloff ‘898 patent in view of the Payton ‘861 patent and further in view of the Hayward ‘315 patent; rejected claim 22 under 35 U.S.C. 103(a) as being unpatentable over the Masloff ‘898 patent in view of the Payton ‘861 patent further in view of the Hayward ‘315 patent and further in view of AAPA; and rejected claim 23 under 35 U.S.C. §103(a) as being unpatentable over the Masloff ‘898 patent in view of the Payton ‘861 patent and further in view of U.S. Patent No. 3,085,589 to Sands (hereinafter referred to as “the Sands ‘589 patent”).

By this Response and Amendment,

independent claims 1, 17 and 23 have been amended to recite “the first outer wall portion defining an outwardly convex elliptical curve” and the rejections thereto have been traversed;

claim 8 has been amended to recite more definite structure; and

new independent claim 24 has been added.

It is respectfully submitted that the above amendments do not introduce any new matter to this application within the meaning of 35 U.S.C. §132.

Indefiniteness Rejections

By this Response and Amendment, Applicant amended claim 8 to provide more definite language. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the indefiniteness rejection.

Prior Art Rejection

The Examiner rejected claims 1 – 3 and 15 as being unpatentable over the Sands ‘589 patent in view of the Larbuisson ‘832 patent. The Examiner rejected claims 1 – 3, 7, 8, 10 – 12 and 15 as being unpatentable over the Masloff ‘898 patent in view of the Larbuisson ‘832 patent and further in view of the Hayward ‘315 patent; rejected claims 13 and 14 as being unpatentable over the Masloff ‘898 patent in view of the Larbuisson ‘832 patent and further in view of the Hayward ‘315 patent and further in view of AAPA; rejected claims 9 and 16 as being unpatentable over the Masloff ‘898 patent in view of Larbuisson ‘832 patent in view of the Hayward ‘315 patent and further in view of the Payton ‘861 patent; rejected claims 17 – 20 as being unpatentable over the Masloff ‘898 patent in view of the Payton ‘861 patent; rejected claim 21 as being unpatentable over the Masloff ‘898 patent in view of the Payton ‘861 patent and further in view of the Hayward ‘315 patent; rejected claim 22

as being unpatentable over the Masloff '898 patent in view of the Payton '861 patent further in view of the Hayward '315 patent and further in view of AAPA; and rejected claim 23 as being unpatentable over the Masloff '898 patent in view of the Payton '861 patent and further in view of the Sands '589 patent.

Response

By this Response and Amendment, independent claims 1, 17 and 23 have been amended and, as amended, Applicant traverses the rejections thereto since all of the features of the presently claimed invention are not disclosed, taught or suggested by any of the cited prior art combination. To establish a *prima facie* case of obviousness, the Examiner must establish: (1) some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

Amended claim 1, 17 and 23 each recites an explosion protection valve (or shut-off device) "...wherein the first outer wall portion defining an outwardly convex elliptical curve and the second outer wall portion defining a conical path...."

The Masloff '898 patent discloses a safety closing device having a valve head (7) and a valve stem 11. The intersection between the valve head (7) and the valve stem (11) has an inwardly curved concave section. The Hayward '315 patent discloses an automatic cut off valve having a conical cross section. The Sands '589 patent, the Larbuisson '832 patent, and the Payton '861 patent all disclose a safety valve using a closing body with a conical cross-section. That portion of AAPA that was cited by the Examiner in support of the obviousness rejection does not refer to the shape of a closing body.

In contrast to the presently claimed invention, none of the cited prior art references, alone or in combination with each other discloses, teaches or suggests a “first outer wall portion defining an outwardly convex elliptical curve and the second outer wall portion defining a conical path” as recited in the independent claims of the present application. All of the references disclose a closing body with a constantly conical cross-section or with an *inwardly curved concave* section, which is in opposition to the presently claimed subject matter.

Therefore, none of the references, alone or in any combination with each other, renders the presently claimed invention obvious since they do not disclose, teach or suggest all of the features of the independent claims of the present application. Moreover, as dependent claims necessarily recite all of the features of the independent claims from which they depend, claims 2 – 3 and 7 – 16, which ultimately depend from independent claim 1, and claims 18 – 22, which ultimately depend from independent claim 17, are asserted to be allowable for at the same reasons as their respective independent claims. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the prior art rejections.

MISCELLANEOUS

Independent claim 24 is asserted to be patentable over the cited prior art for at least the reason that the prior art does not disclose, teach or suggest an explosion protection body wherein “the closing body (3) is configured as a hollow body in such a way that the outermost peripheral region is adapted to promote a spring action of the closing body” as recited in claim 24. The explosion protection valve as recited in claim 24 has a hollow body that acts like a cup spring. However, the cited prior art references, taken alone or in any combination with each other, are silent with respect to spring like behavior of the closing body.

CONCLUSION

In light of the foregoing, Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,
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